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PATENT ABSTRACTS OF JAPAN

(11)Publication number : **06-315515**

(43)Date of publication of
application : **15.11.1994**

(51)Int.Cl.

A61J 3/00
B41J 3/407
B65H 3/44
B65H 39/06

(21)Application
number : **05-355101**

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(22)Date of filing : **31.12.1993**

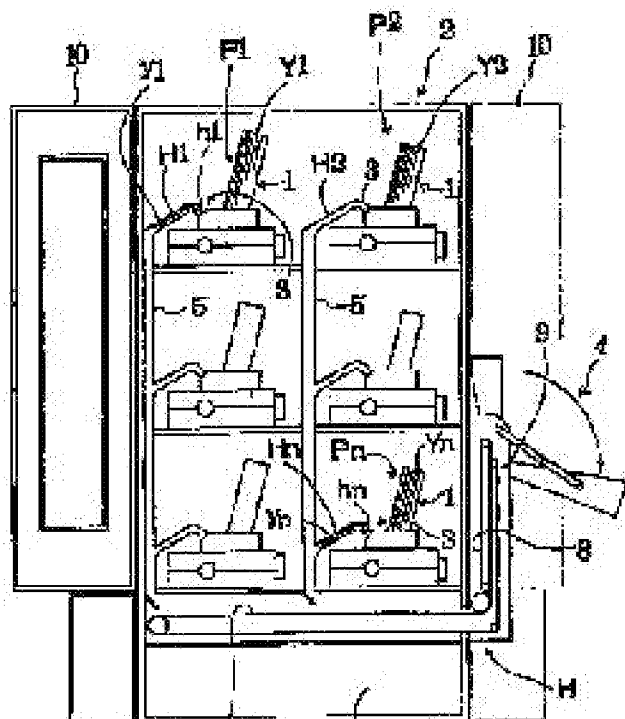
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(54) MEDICINE BAG PRINTER

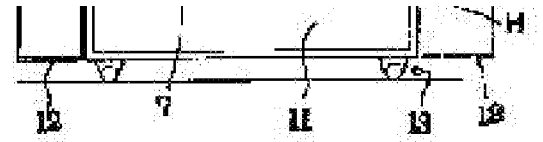
(57)Abstract:

PURPOSE: To save the labor of a medicine writing work by carrying medicine bags processed by plural sets of printers to a medicine bag taking-out position by a carrying means, and processing each medicine bag so as to be put in order at every patient in the medicine bag taking-out position.

CONSTITUTION: This medicine bag printer controlled by a computer of a pharmacist's office, based on data related to a prescription outputted from each medical examination department in a hospital is constituted by mounting plural sets of printers P (P1-Pn) in which a buffer of some capacity is contained, on a shelf of a printer containing case 2. In each printer P, medicine bags Y1-Yn of each different size are supplied to a paper supply part 1. Also, to a paper discharge part 3 of each printer P, each initial end of carrying paths H1-Hn for constituting a carrying device H is connected, and the printed medicine bags pass through a chute 5, respectively and



are joined by a common horizontal conveyor 7, and thereafter, pass through a vertical conveyor 8 and are fed to a medicine bag taking-out part 4, and accumulated in the lump at every patient.



JAPANESE

[JP,06-315515,A]

Drawing selection

Representative draw

CLAIMS DETAILED DESCRIPTION TECHNICAL
FIELD PRIOR ART EFFECT OF THE INVENTION
TECHNICAL PROBLEM MEANS OPERATION
EXAMPLE DESCRIPTION OF DRAWINGS DRAWINGS

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

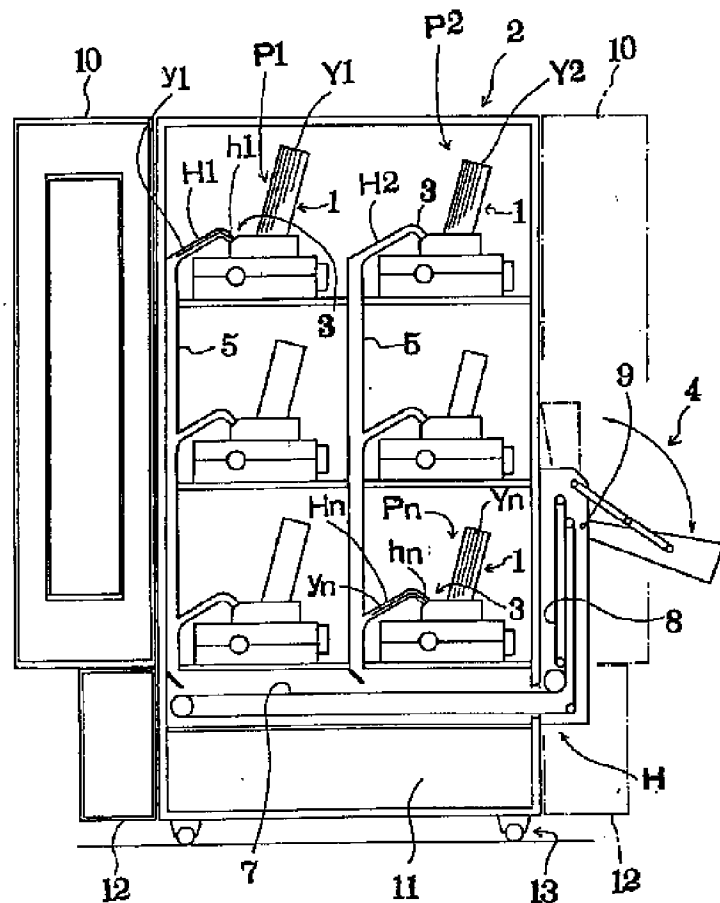
[Industrial Application]This invention relates to an envelope-for-drug printer.

[0002]

[Description of the Prior Art]Conventionally, in the chemist's shop of a hospital, the drugs prepared according to the prescription which each medical practitioner prescribed were stored to the envelope for drug, and also prescribing this to a patient is performed. And required matters, such as a name of patient and direction for use, were written down in the envelope for drug by the handwriting work by a pharmacist.

[0003]

[Problem(s) to be Solved by the Invention]By the way, there is a problem that time to wait after a patient finishes the medical examination in a consultation room for the cause of labor shortage and others versatility until it receives medication is very long in many hospitals, including a large hospital. In particular, these days, the kind of medication increases, therefore the size of an envelope for drug also



[Translation done.]

increases, and since writing down a name of patient, direction for use, etc. in an envelope for drug takes time and effort, time to wait has been prolonged further.

[0004]There were problems, such as a pharmacist's burden becoming large for envelope-for-drug handwriting work, and becoming the trouble of the dispensing business which is a pharmacist's original business.

[0005]This invention solves the problem which the above-mentioned conventional thing has, Secretary Minae work is saved labor, and it aims at providing the envelope-for-drug printer which can open a pharmacist from the handwriting work of an envelope for drug.

[0006]

[Means for Solving the Problem]In order that this invention may attain the above-mentioned purpose, it is provided with two or more sets of printers, and a means to convey an envelope for drug processed with each printer to an envelope-for-drug extraction position, and summarizes each envelope for drug for every patient in said envelope-for-drug extraction position.

[0007]

[Function]The above-mentioned means was adopted in this invention.

Therefore, Secretary Minae work will be saved labor and the pharmacist can deal with the envelope for drug which was wide opened from the handwriting work of the envelope for drug, and was taken out per patient.

[0008]

[Example]Drawing 1 shows one example of the envelope-for-drug printer A by this invention, A controller, and P1-Pn are printers, and the terminal computer which was allocated in each clinical division as for T1-Tn, the host computer which Ch allocated in the computer room, the computer which allocated Cp in the chemist's shop, and C constitute the host computer Ch as a center. That is, the terminal computers T1-Tn are connected to one side of the host computer Ch, and two or more printers P1-Pn are connected to it via the computer Cp and the controller C of a chemist's shop in another side. m is a modem for communication.

[0009]And the data of the contents of medical examination, a prescription, etc. inputted from the terminal computers T1-Tn of each clinical division is transmitted to the host computer Ch, and is processed. It limits to the print business of an envelope for drug hereafter, and the host computer Ch is explained, although it is a general-purpose computer and plural jobs, such as paperwork, are performed based on the above-mentioned data.

[0010]The data about a prescription is outputted to the computer Cp of a chemist's shop among the various data

inputted into the host computer Ch. While the computer Cp of a chemist's shop displays the contents of the prescription on the display in response to the above-mentioned data, the above-mentioned data is outputted to the controller C. The controller C has a function described below.

[0011]** The function to judge the size and the number of sheets of a required envelope for drug for every patient based on the data of the prescription inputted from the host computer Ch.

[0012]** The function which the envelope for drug of the above-mentioned size chooses the printer supplied to the feeding part from two or more printers P1-Pn, and outputs printing data, such as a name of patient and direction for use, to the printer.

[0013]** The function operated from the printer of the way with many [when the envelope for drug of the same size is supplied to two or more printers] envelopes for drug which are not printed [which remained in the feeding part].

[0014]** The function to operate these printers simultaneously when the envelope for drug of the same size is supplied to two or more printers and one patient takes two or more envelopes for drug of the same size.

[0015]** The function which buffers the traffic congestion which the number of the prescriptions which input the data which contained only the register which memorizes the prescription of patient 300 justification in the inside of the controller C, and inputted it into it from the host computer Ch by carrying out first-in first-out exceeds the throughput of the printers P1-Pn, and produces.

[0016]** The function to operate the printers to which these envelopes for drug were supplied all at once when one patient's dispensing takes two or more envelopes for drug.

[0017]** The function to report troubles, such as an envelope-for-drug piece, jamming, and failure.

[0018]And judgment sorting of the contents of the prescription is carried out by the controller C which has such a function, and printing data are outputted to the printers P1-Pn applicable to this.

[0019]The printers P1-Pn are the general things which built in the buffer of capacity a little, and printers of various forms, such as a dot impact printer, a thermal transfer printer, and a laser beam printer, can be used for them.

[0020]As shown in drawing 2, each printers P1-Pn are laid in the shelf of the printer accommodating case 2.

The envelopes for drug Y1-Yn of size different, respectively are supplied to the feeding part 1 of each printers P1-Pn.

Each start edge of the carrying paths H1-Hn which constitute the conveying machine H has connected with the delivery unit 3 of each printers P1-Pn with which the printed envelopes for drug y1-yn are discharged.

Each carrying paths H1-Hn joined on the way, and also the termination has reached the envelope-for-drug takeoff connection 4 provided in the 1 side predetermined height of the printer accommodating case 2.

[0021]Between the delivery unit 3 of each printers P1-Pn, and the shot 5 of each carrying path H1 - Hn start edge connected with this, as shown in drawing 3, the paper feed roller 6 which rotates to the eject direction for assisting discharge of the printed envelopes for drug y1-yn is formed. 20 in a figure is a platen and 21 is a print head.

[0022]The horizontal conveyor 7 and the vertical conveyor 8 which are conveyed to the envelope-for-drug takeoff connection 4 have connected the printed envelopes for drug y1-yn with the lower end of each shot 5.

Since the printed envelopes for drug y1-yn turn a print face up and are discharged from the delivery unit 3 of the printers P1-Pn, the printed envelopes for drug y1-yn will turn a print face down, and will be accumulated on the envelope-for-drug takeoff connection 4.

[0023]The containing shelf with which the envelope-for-drug takeoff connection 4 can be folded up up, and can be stored via the hinge 9, and ten in a figure can store the front door of the printer accommodating case 2, and 11 can store spare Hitoshi Minae, and 12 are a door of the containing shelf 11, and an axle-pin rake for movement in 13.

[0024]Drawing 4 from two or more printers P1-Pn which show the modification of the printer accommodating case and were stored by the shelf of this printer accommodating case 2' for transverse planes. The printed envelopes for drug y1-yn which turned the print face up and were discharged will turn a print face down, and will be accumulated on the envelope-for-drug takeoff connection 4 provided in the lower part of the transverse plane of printer accommodating case 2'.

[0025]The envelopes for drug Y1-Yn which are not printed [which are used for such printers P1-Pn], At the surface and the rear face of the envelope for drug Y which were formed in saccate [in which pasted up three sides of the paper of two rectangular rear surfaces mostly, and one side carried out the opening]. Common notation matters, such as a hospital name and general care, are printed beforehand, the date, a name of patient, direction for use, other special affairs, etc. were printed on the blank with the above-mentioned printers P1-Pn, and also drugs are stored, and a patient is supplied.

[0026]Below, an operation of the envelope-for-drug printer A constituted as mentioned above is explained. First, in the clinical division which examined the patient, the data of the

prescription inputted into the terminal computers T1-Tn is inputted into the controller C via the host computer Ch of a computer room.

[0027]In the controller C which received the data of the prescription, the above. *****, By *****, judge the size and the number of sheets of an envelope for drug required for one patient, and the printer to which the envelope for drug of the above-mentioned size was supplied by the feeding part is chosen from the printers P1-Pn allocated in the chemist's shop, Output printing data, such as a name of patient and direction for use, to that printer, the buffer of each printers P1-Pn is made to memorize, and the envelopes for drug with which this patient is supplied are made to print all at once.

[0028]And when the envelope for drug of the same size is supplied to two or more printers, When the frequency of envelope-for-drug supply can be reduced and the same patient takes two or more envelopes for drug of the same size further by operating the printer of the way with much remainder of an unprinted envelope for drug, These printers can be operated simultaneously and the envelope-for-drug print time required per patient can be shortened.

[0029]When a number of prescriptions which exceed the throughput of the printers P1-Pn from each clinical division are inputted, traffic congestion can be buffered by once storing the data of a prescription in a register with built-in controller C, and carrying out first-in first-out of this to it.

[0030]During the above-mentioned envelope-for-drug print, if troubles, such as an envelope-for-drug piece, jamming, and failure, occur, this purport can be reported.

[0031]Thus, the printed envelopes for drug y1-yn, From the delivery unit 3 of each printers P1-Pn, it is conveyed certainly to each shot 5, and is conveyed by the envelope-for-drug takeoff connection 4 via the horizontal conveyor 7 and the vertical conveyor 8 from each shot 5, a print face is turned down, and rotation of the paper feed roller 6 of each carrying path start edges h1-hn is accumulated.

[0032]By the above-mentioned operation, to the envelope-for-drug takeoff connection 4. Since they are collectively accumulated for every patient by the printed envelopes for drug y1-yn on which the data of a name of patient, direction for use, etc. was printed, A mistake can be prevented, while the work which stores drugs, and the provision work to a patient can be put in block to those envelopes for drug for every patient, and being able to perform them to them, therefore streamlining the above-mentioned work.

[0033]Since the printed envelopes for drug y1-yn turn a print face down and are accumulated in the envelope-for-drug takeoff connection 4, Even if it takes out the printed

envelopes for drug y1-yn for several patients collectively, when a print face is turned up, it is convenient to turn up, and for a patient's printed envelopes for drug y1-yn printed previously to drugs-store in the order of a print, and to supply it.

[0034]The label of the other proper use for liquor bottles can be made to be able to print on at least one among the above-mentioned printers P1-Pn, and laborsaving [writing / the said label] can also be attained.

[0035]The delivery timing of the printed envelopes for drug y1-yn in the delivery unit 3 of the printers P1-Pn, On printing on an envelope for drug in order of the prescription which could control the conveying machine H by the controller C, could make accumulated in order given [the printed envelopes for drug y1-yn] in a prescription, and was inputted into the host computer. An envelope for drug can be made to be able to accumulate in order of reception of a prescription, and a medicine can be prescribed for the patient in order of a patient's reception.

[0036]As mentioned above, the handwriting work of an envelope for drug, the extraction work from a printer, and envelope-for-drug adjustment work are saved labor, and since dispensing for one patient is put in block and can be performed efficiently, the time which they take is shortened substantially, Since a pharmacist's burden becomes light while being able to shorten a patient's medication time to wait substantially, the pharmacist can concentrate on original dispensing business.

[0037]When two or more kinds of drugs which are the same direction for use and use the envelope for drug of the same size into 1 prescription are indicated, an envelope-for-drug usage number can also be saved on printing on the envelope for drug of one sheet of the above-mentioned size.

[0038]If a patient's prescription can be made to print on at least one among the above-mentioned printers P1-Pn and it is made such, By preparing a medicine being able to check a prescription content, and a pharmacist carrying the above-mentioned prescription and the printed envelopes for drug y1-yn, and looking at this, even if it does not see the display of the computer Cp of a chemist's shop one by one. Two or more pharmacists take charge of one patient at a time, respectively, and can perform two or more patients' dispensing in parallel simultaneously, and two or more pharmacists take charge of a dispensing field different, respectively, dispensing of two or more minute field of one patient can also be performed in parallel simultaneously, therefore the efficiency of prescription work can be raised, and the medication to a patient can also be further checked with the above-mentioned prescription.

[0039]In this case, troubles, such as an envelope-for-drug

piece, jamming, and failure, and operating states of the printers P1-Pn, such as a traffic jamming state, can be displayed on the computer Cp of a chemist's shop.

[0040]When a trouble occurs in a part of above-mentioned envelope-for-drug printer A, unless the host computer Ch is downed, each printer is directly controlled by the host computer Ch, and the function of prescription printing can be maintained at least.

[0041]A tablet separate-packaging machine, the drugs separate-packaging machine of powdered medicine separate-packaging machine and others versatility, etc. can be connected to the above-mentioned envelope-for-drug printer A, these can be controlled by the controller C or the computer Cp of a chemist's shop, and the above-mentioned tablet separate-packaging machine, a powdered medicine separate-packaging machine, etc. can also be operated according to the contents given in a prescription.

[0042]

[Effect of the Invention]Since this invention was constituted as mentioned above, can save labor Secretary Minae work and That sake, A pharmacist can be opened from the handwriting work of an envelope for drug, and two or more kinds of envelopes for drug can be used, and further, since each envelope for drug was summarized for every patient in the envelope-for-drug extraction position, it has the effect which was excellent in the ability to deal with the taken-out envelope for drug per patient.

[Translation done.]

JAPANESE

[JP,06-315515,A]

Drawing selection

Representative draw

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]The mimetic diagram showing the entire
 configuration of one example

[Drawing 2]The front view of a printer accommodating case

[Drawing 3]The side view of a paper feed roller

[Drawing 4]The side view of the modification of a printer
 accommodating case

[Description of Notations]

C -- Controller

Ch -- Host computer

H -- Conveying machine

P1-Pn -- Printer

T1-Tn -- Terminal computer

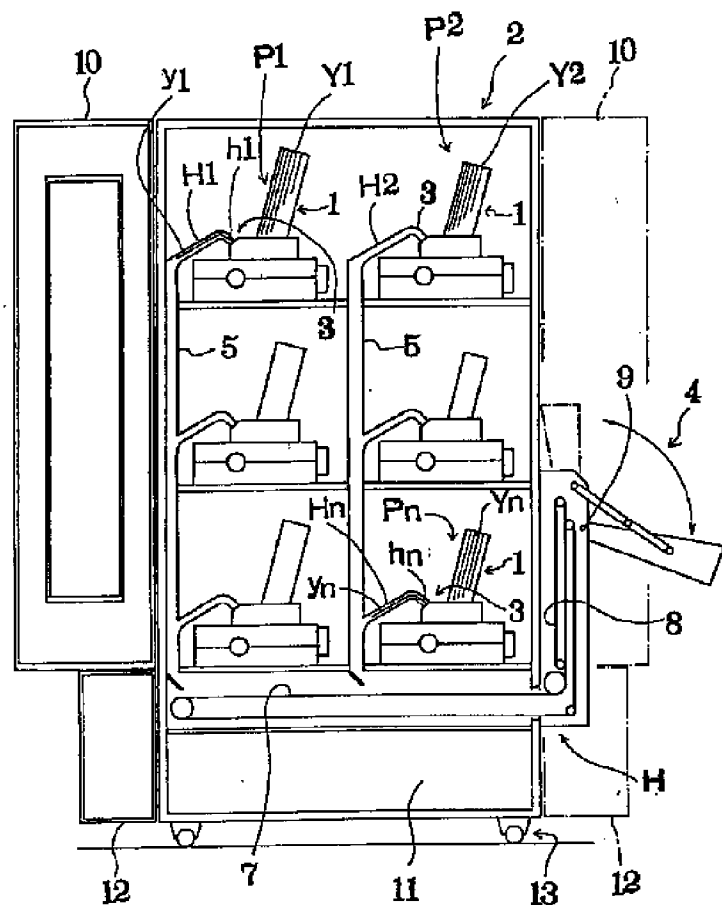
Y1-Yn -- Envelope for drug

y1-yn -- Printed envelope for drug

1 -- Feeding part

3 -- Delivery unit

4 -- Envelope-for-drug takeoff connection



[Translation done.]

[Translation done.]

JAPANESE

[JP,06-315515,A]

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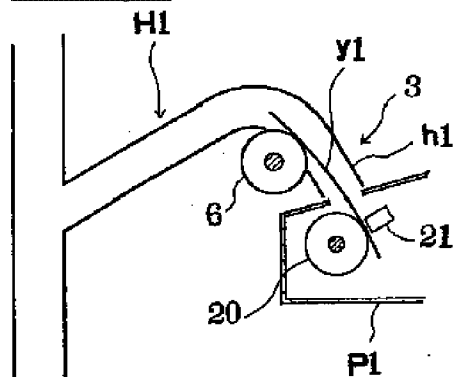
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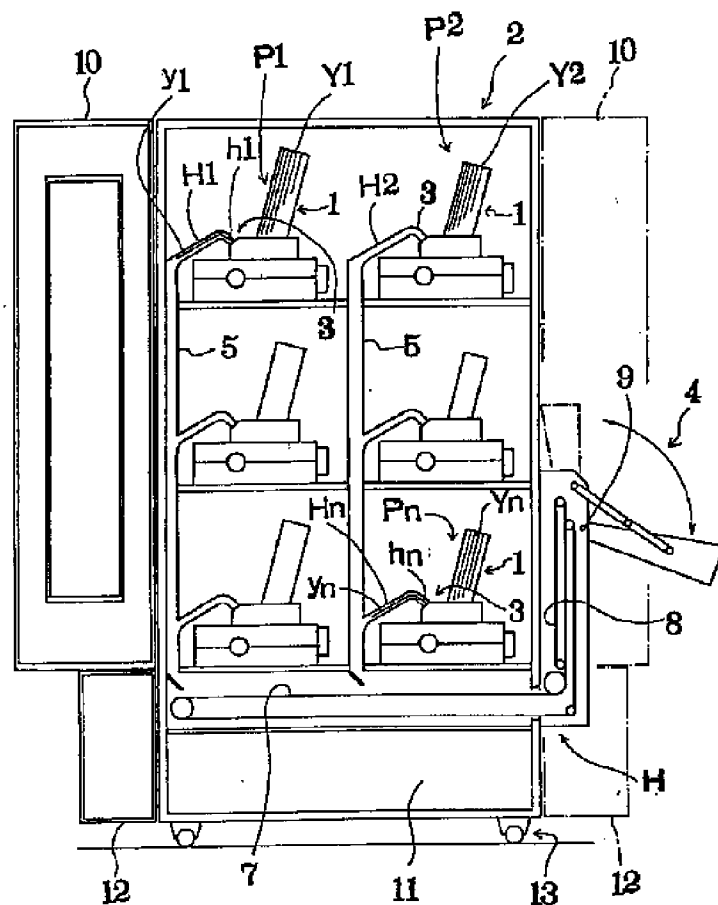
DRAWINGS

[Drawing 3]

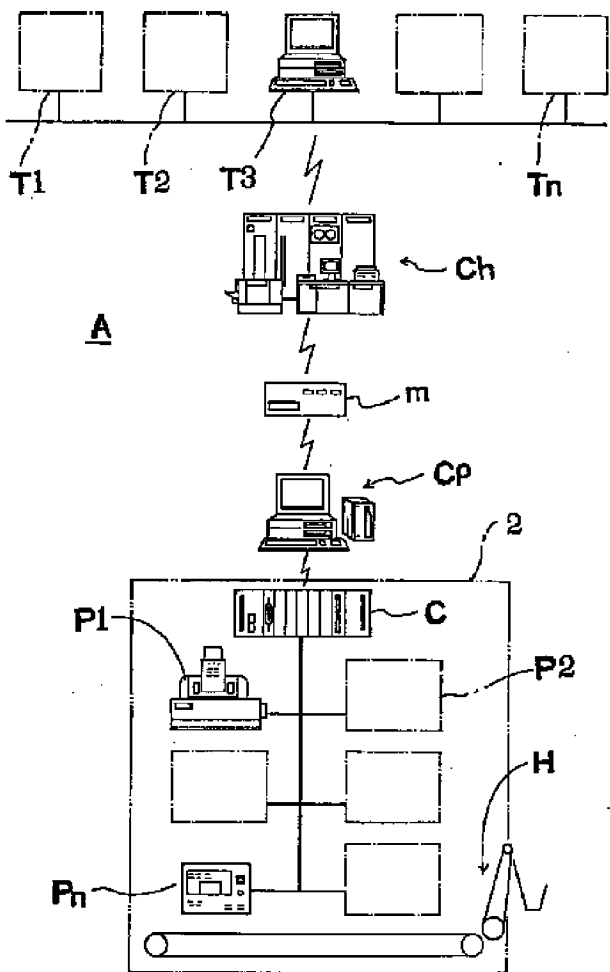


[Drawing 1]

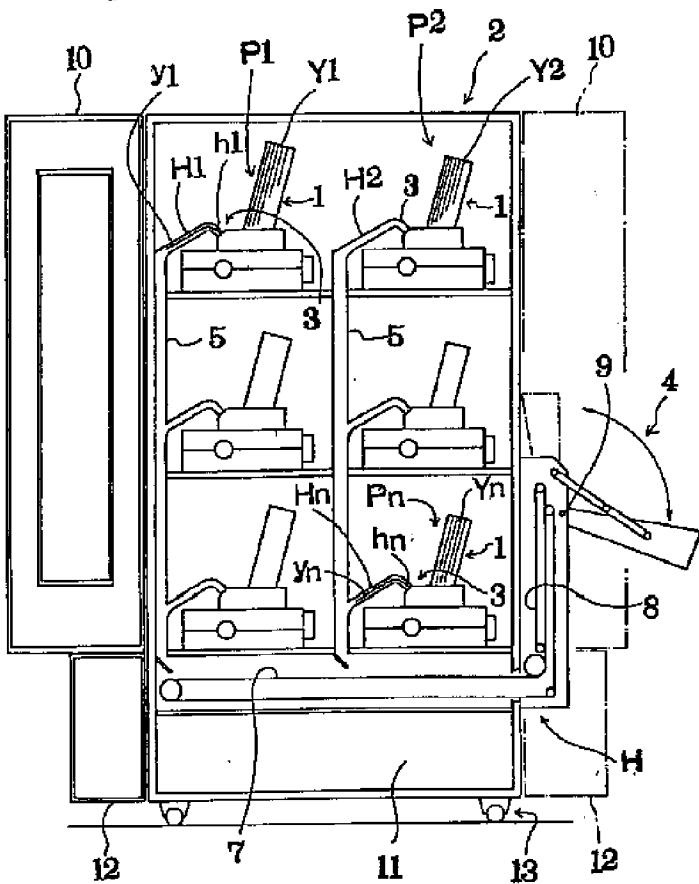
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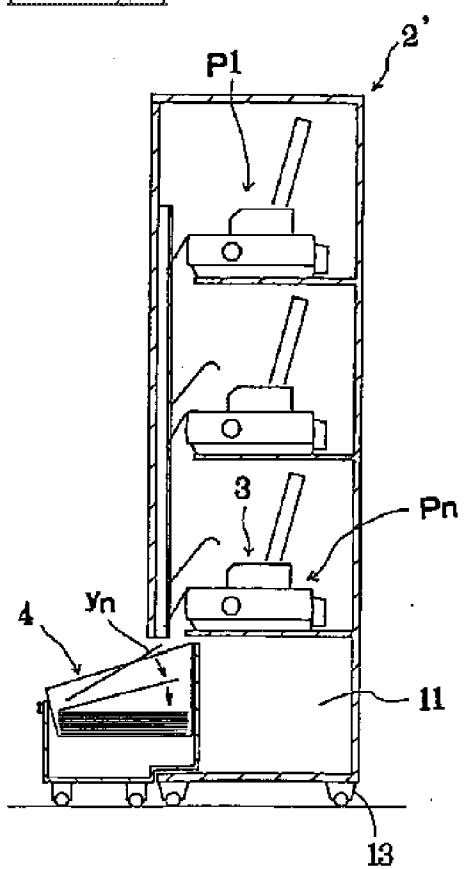
[Translation done.]



[Drawing 2]



[Drawing 4]



[Translation done.]